REMOVAL ACTION PLAN
FOR
PARK PLATING
LOVES PARK, ILLINOIS
TDD# T05-9112-027
PAN EIL0762SAA

Prepared by: William Sass Date: 6/5/92

Reviewed by: Linda Andrews (Patrick Zelby for) Date: 6/8/92

Approved by: Patrick Zelby Date: 6/8/92

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International Specialists in the Environment

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1.0 SITE DESCRIPTION:

The Park Plating and Metal Finishing facility (PPMF) is an inactive electroplating facility located at 923 East River Lane, Loves Park, Illinois (Figure 1). The site is located on 0.12 acres of land in the NE 1/4, Section 12, T.44N, R.1E of Winnebago County. It is bordered on the north by East River Lane, on the east by a business and an open field, on the south by an asphalt parking lot, on the southwest by a business, and on the west by D Machine (a large equipment repair shop). Site features are presented in Figure 2.

2.0 SITE BACKGROUND:

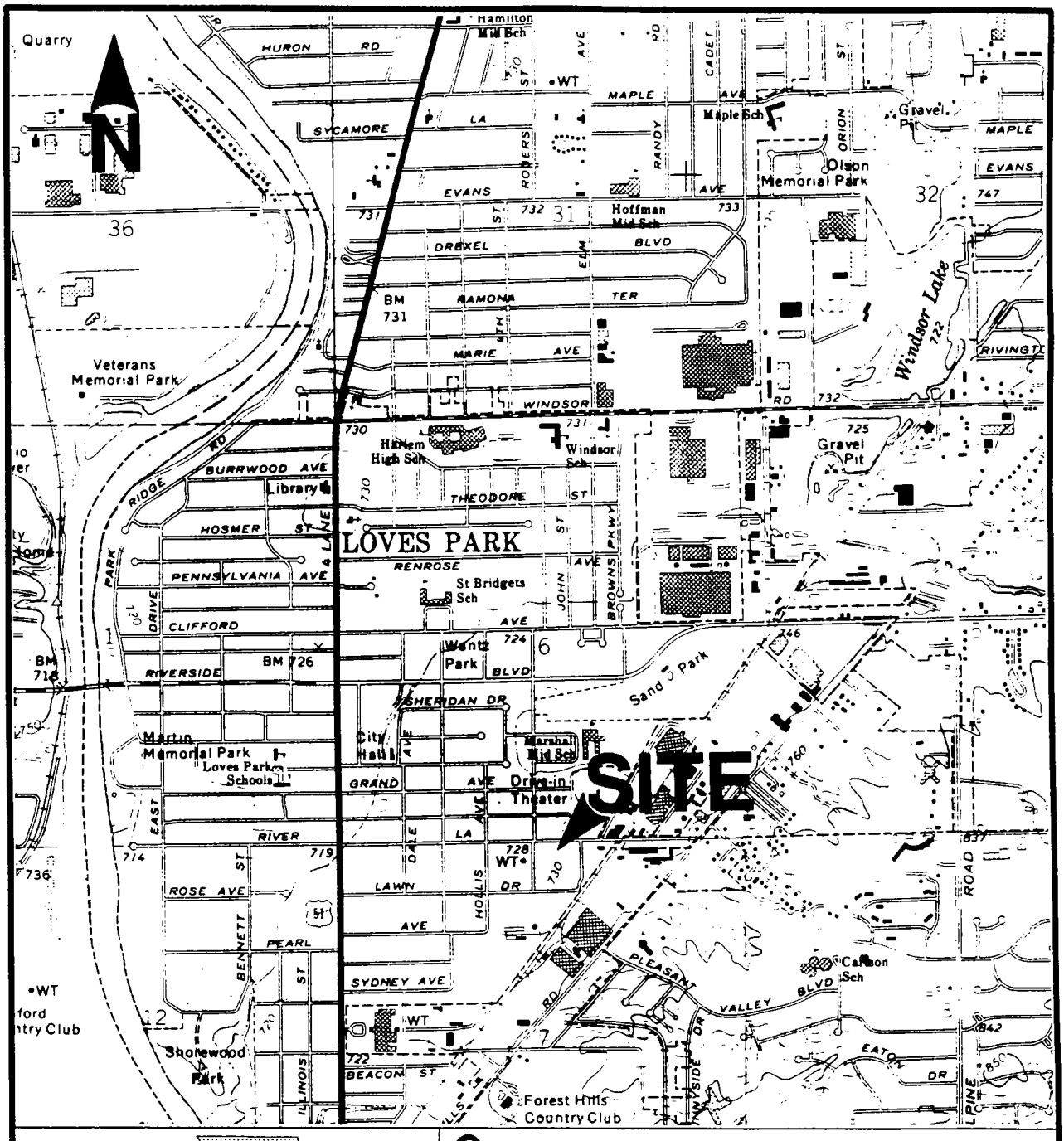
The Park Plating and Metal Finishing facility (PP) conducted electroplating operations from 1954 to 1990. The facility plated metal screws and fasteners with zinc, black oxide, and cadmium. The plating shop contained a zinc plating line, cadmium plating line, black oxide line, a closed loop wastewater treatment system, and associated dip tanks and rinse tanks for plating lines.

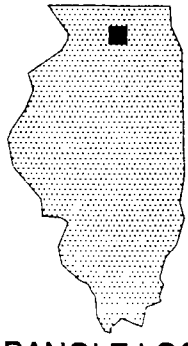
The PP site operated under two permits, both issued by the Illinois Environmental Protection Agency (IEPA). One permit was issued by the Division of Water Pollution Control to regulate the operation of a closed loop plating rinse pretreatment system (1985-EB-1938). The second permit was issued by the Division of Air Pollution Control for air pollution control equipment consisting of one zinc electroplater, one cadmium electroplater and one conversion coater. In addition, the facility obtained a supplemental wastewater discharge permit from the Sanitary District of Rockford to discharge water into the sewer system.

While in operation, PP generated approximately two cubic yards of electroplating sludge every 90 days. The electroplating sludge was a result of the closed loop rinse pretreatment system operation. The waste listed as F006. The waste was accumulated in polyethylene bags which were stored on wooden pallets. On November 18, 1980, the PP facility submitted a RCRA part A permit application to the U.S. Environmental Protection Agency (U.S. EPA) as a small quantity generator.

The PP facility was a hazardous waste generator, and as such was periodically inspected to ensure compliance with RCRA regulations. The PP facility was cited for numerous violations by IEPA during a Compliance Evaluation Inspection (CEI) conducted on June 15, 1983, listed as follows:

- Failure to conduct a detailed physical and chemical analysis of approximately 20 drums stored on site.
- Failure to have a written waste analysis plan.
- Failure to maintain operational inspection records.





QUADRANGLE LOCATION

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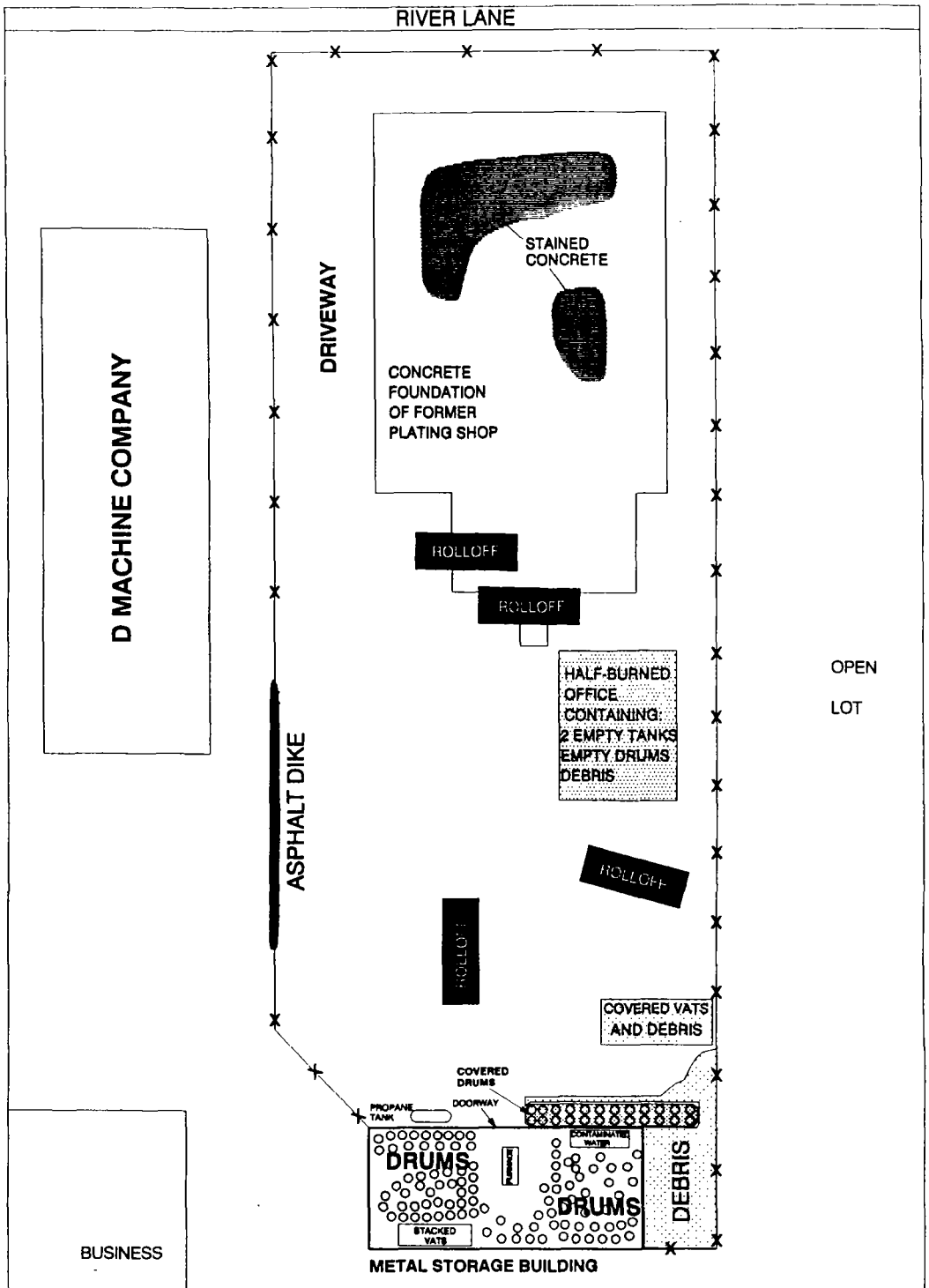
Region V

TITLE: SITE LOCATION MAP		FIGURE #: 1
SITE: PARK PLATING		TDD#: T05-9112-027
CITY: LOVES PARK	STATE: ILLINOIS	SCALE: 1:24,000
SOURCE: USGS QUADRANGLE MAPS		DATE: 12/4/91 REVISED: 6/5/92



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Region V

TITLE: SITE FEATURES MAP	FIGURE #: 2
SITE: PARK PLATING	TDD#: T05-9112-027
CITY: LOVES PARK STATE: ILLINOIS	SCALE: NONE
SOURCE:	DATE: 12/4/91
	REVISED: 2/27/92

- Failure to maintain hazardous waste training and operational records.

- Failure to develop a contingency plan.

- Failure to maintain containment of hazardous waste stored on-site, and failure to conduct weekly inspections of containers housing hazardous waste.

The PP facility was also cited for exceeding discharge standards set by the Sanitary District of Rockford for cadmium.

In 1984, Baxter and Woodman, an environmental consulting firm, submitted a closure plan to the IEPA on behalf of PP for three former on-site storage areas. The IEPA approved the closure of these three areas on August 4, 1988. In addition, a fourth area was approved for closure by the IEPA on September 2, 1988. Drums containing soil from this area were disposed of at the BFI Waukegan Landfill. The Part A permit application filed in November 1980 was withdrawn upon IEPA approval of the closure plans.

IEPA conducted inspections of the PP facility on February 13, 1987, and August 16, 1989, and again cited the facility with numerous violations for failure to comply with regulations. The last CEI to be conducted by IEPA while PP was still in operation took place on September 21, 1990. The PP facility was again cited for exceeding the 90-day limit and storing approximately 11 30-gallon drums of hazardous waste. These drums had reportedly been stored on-site for approximately four years. On September 26, 1990, the PP facility was destroyed by fire.

The Loves Park Fire Department responded to the fire. Approximately 400,000 gallons of water was utilized to extinguish the fire. PPMF contracted FIW, Inc. of Pecatonica, Illinois, to collect the runoff water. The water was shipped as non-hazardous wastewater to CyanoKem in Detroit, Michigan. The building debris was placed into roll-off boxes by Regulatory Compliance Associates, contracted by owner of the PP facility, John Gruner. The plating lines were emptied into drums.

On May 31, 1991, Mary Cantebury of IEPA conducted a CEI at the PP site. To comply with the violations cited during this inspection, the entire property was fenced, warning signs were posted every 50 feet, all open drums located outside were covered with tarpaulins, and measures were taken to prevent runoff. In addition, measures were taken to maintain the integrity of the drums staged on-site.

Presently, 150 drums of hazardous material, four roll-off boxes of non-hazardous material, and 700 gallons of wastewater are staged on-site. Removal of the hazardous material is pending.

3.0 SITE ASSESSMENT:

On February 28, 1992, TAT members Richard Boelter, Kirsten Elvekrog, and William Sass met with U.S. EPA On-Scene Coordinator (OSC) Tom Basso at the PP site at 0830 hours. OSC Basso obtained permission from D Machine to allow U.S. EPA and TAT to set up behind their building, a short distance from the drum storage building. Shortly thereafter, Russ Gruner, son of site owner John Gruner, arrived on-site. Gruner provided the OSC with the key to the drum storage building.

At 0950 hours, TAT entered the drum storage building in level B personal protection and conducted air monitoring with the HNU Model PI-101 photoionization detector with a 10.2 eV probe, an MSA Model 260 explosimeter, and a Hydrogen Cyanide Monitox. No readings above background levels were observed. Drums occupied most of the space in the building, many stacked two to three high, making it difficult to access most of them. TAT estimated there to be approximately 120-130 drums in the building. Many of them were 30-gallon open-top steel drums overpacked in 55-gallon poly drums. There were also many rusty steel drums with poly liners, a tank containing water, an unidentified gas cylinder, three empty vats, and miscellaneous small buckets and cans. All of the drums that could be observed had hazardous waste labels on them. At least two of the drums were labelled "chromate". Immediately outside the building were 20 to 30 drums covered by a tarpaulin.

TAT collected samples from six of the drums inside the building. Samples 0001 and 0003 were dark orange liquids collected from drums labelled "chromate". Sample 0002 was a two-phase liquid collected from a steel drum. The upper phase (20-24 inches) of sample 0002 was clear and colorless, while the lower phase (1 inch) was cloudy and orange-brown in color.

At 1036 hours TAT returned to the building and collected three additional samples. Sample 0004 was a brown liquid with pH 13-14 collected from a steel drum. Drum sample 0005 was similar in appearance and pH to sample 0004. A sixth sample (labelled 0006) was a clear yellow liquid collected from a drum.

At 1100 hours TAT finished sampling and closed bungs on all sample drums. TAT downgraded to level C to conduct field screening for pH, chromate, cyanide, flammability, and solubility in water and hexane. Samples 0001 and 0003 were soluble in water and positive for oxidizer test according to the Merck EM Quant kit for chromate. Measurement of pH on the two samples was not determined because the pH paper was unreadable after contacting them. Samples 0004 and 0005 pH values of 13-14 and were both positive for reactive cyanide according to the Merck EM Quant test kit for cyanide. Sample 0002 (two-phase) head space sampling with the HNU meter ranged from 100 to 200 ppm. The upper phase was soluble in hexane and insoluble in water, while the lower phase was soluble in water and insoluble in

hexane. The upper phase was highly flammable when a wooden tongue depressor was dipped in the sample and held near a flame.

Samples 0001, 0003, 0004, and 0005 were all analyzed for RCRA metals plus zinc and nickel and pH. Samples 0004 and 0005 were also analyzed for total and reactive cyanide. A distilled water blank (named 0007) was subjected to all analyses. The OSC decided against laboratory analysis of sample 0002 because it required further field testing. All samples were analyzed by IEA Laboratories, Schaumburg, Illinois, under TAT Analytical Services TDD# T059112-810 with a two-week verbal turnaround time.

4.0 ANALYTICAL RESULTS

Analytical results are summarized in Table 1. Samples 0001 and 0003 both had high levels of chromium (22,000 mg/L and 55,000 mg/L, respectively). Sample 0001 contained cadmium at 15,000 mg/L. Sample 0003 had a pH of 0.45. Samples 0004 and 0005 each had high levels of total cyanide (18,000 mg/L and 600,000 mg/L, respectively), as well as high pH (13.24 and 12.70). Sample 0004 contained zinc at a concentration of 25,000 mg/L. Sample 0005 had a cadmium concentration of 9,000 mg/L. None of the metals were detected in the blank (0007), and cyanide levels were relatively low (0.1 mg/L total and 6 mg/L reactive).

5.0 THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Conditions observed during the U.S. EPA investigation of the Park Plating site that constitute a threat and may be used to determine the appropriateness of a removal action as outlined in Section 300.415(b)(2) of the National Contingency Plan (NCP) included:

- Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chains: Potential exposure of populations to hazardous materials exists at the Park Plating site. Drums on-site, many of which are in deteriorating condition, contain acids, caustic liquids, carcinogens, and cyanide liquids. Acids and caustics may cause severe burns if skin or eye contact is made. Cyanide liquids are poisonous.

- Hazardous substances in or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release: Many of the drums on-site are in deteriorating condition, which may contribute to the degradation and release of hazardous substances from additional drums. Incompatible materials such as acids and cyanide-containing material are stored in the same building. Should there be a release from these drums, potentially a large volume of poisonous hydrogen cyanide gas may be released.

TABLE 1
RESULTS OF DRUM SAMPLING*
PARK PLATING
LOVES PARK, ILLINOIS
FEBRUARY 28, 1992

Analyte	Sample ID				
	0001	0003	0004	0005	Blank 0007
Arsenic	ND	ND	ND	4.2	ND
Barium	ND	ND	ND	ND	ND
Cadmium	15,000	920	ND	9,000	ND
Chromium	22,000	55,000	4.6	15	ND
Lead	ND	14	ND	0.96	ND
Mercury	ND	ND	ND	ND	ND
Selenium	ND	ND	ND	ND	ND
Silver	ND	ND	ND	1.1	ND
Nickel	4.2	ND	ND	27	ND
Zinc	1,300	280	25,000	210	ND
pH	3.15	0.45	13.24	12.70	8.44
Total Cyanide	NA	NA	18,000	600,000	0.1
Reactive Cyanide	NA	NA	7,500	21,000	6

* All samples were analyzed by IEA Laboratories, Schaumburg, IL under TAT Analytical Services TDD# T059112-810. All results except pH are expressed in mg/L.

ND = Not detected at method detection limits.

NA = Not analyzed

- o Weather conditions that may cause hazardous substances or pollutants or pollutants or contaminants to migrate or be released: Weather conditions such as heavy rain and high wind may contribute to further release of hazardous materials in rolloff boxes stored on-site.

- o Threat of fire or explosion: Threat of fire or explosion exists in the building on-site from liquids stored in at least one drum (0002) that TAT sampled.

6.0 REMOVAL ACTIONS:

Mitigation of threats described above requires disposal of the contents of approximately 150 drums containing acids, caustics, cyanides, metals, and organic liquids, as well as four rolloff boxes containing contaminated construction debris. The proposed removal would consist of two phases: Phase I - staging, sampling, compatibility testing, compositing, and bulking; and Phase II - transportation and disposal. The U.S. EPA will conduct further investigation into extent of contamination of soils and concrete.

7.0 ESTIMATED COSTS:

A cost estimate for the removal at the Park Plating site was prepared by TAT, using the Removal Cost Management System (RCMS) cost projection module and current Emergency Response Cleanup Services (ERCS) contractor personnel and equipment rates. The entire cleanup, including all contractors, subcontractors and U.S. EPA personnel, was projected to cost $379,191.03. The following assumptions were considered during the preparation of the cost estimate.

1) Site activities will take place in two phases:

    a) Staging, sampling, compatibility testing, and bulking (7 days)

    b) Transportation, disposal, decontamination, soil excavation (8 days)

2) Each phase will include one day for mobilization and one day for demobilization.

3) O.H. Materials will conduct the removal.

4) TAT will conduct compatibility testing during the first phase.

5) Cyanide liquids and solids and acid oxidizing liquids and solids will be transported to CyanoKEM in Detroit, Michigan, for treatment.

6) Waste oils will be transported to Clark Processing in Dayton, Ohio, for fuels blending.

7) Four rolloff boxes of contaminated construction debris and one rolloff box of soil/PPE/miscellaneous trash will be transported to Chemical Waste Management's Adams Center Landfill in Fort Wayne, Indiana.

APPENDIX A
COST ESTIMATE

ASSUMPTIONS ASSOCIATED WITH COST ESTIMATES FOR
PARK PLATING
LOVES PARK, ILLINOIS

1) Site activities will take place in two phases:

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Summary Report
Initial Cost Projection Scenario: PARK PLATING

Projection ID Number: IL0762SA
Cleanup Contractor: 1019 - OH MATERIALS

Date: 04/02/92
TAT Contractor: ECOL. & ENVIRON

Cost Projection Summary

Contractor Personnel	67,846.71
Contractor Equipment	43,669.03
Unit Rate Materials	7,718.00
At Cost Materials	1,418.75
Subcontractors	24,548.45
Waste Transportation	12,144.50
Waste Disposal	83,933.25
Cleanup Contractor Subtotal	241,278.69
Federal and State Agencies	0.00
Extramural Subtotal	241,278.69
15 % Extramural Contingency	36,191.80
Extramural Subtotal	277,470.49
TAT Personnel	43,030.40
TAT Special Projects	0.00
TAT Analytical Services	0.00
Total TAT Costs	43,030.40
Other Cost Items	0.00
Extramural Subtotal	320,500.89
15 % Project Contingency	48,075.13
Total Extramural Cost	368,576.03
EPA Regional Personnel	10,615.00
EPA Non-Regional Personnel	0.00
EPA Headquarters Direct	0.00
(0 % of Regional Hours)	
EPA Indirect	0.00
EPA Total	10,615.00
Project Total	379,191.03

Projection ID Number: IL0762SA
Cleanup Contractor: 1019 - OH MATERIALS
Date: 04/02/92
TAT Contractor: ECOL. & ENVIRON

Cost Projection Detail - By Category

Contractor Personnel

Job Category	Number of Employees	Number of Days	Hrs per Day	Labor	PD, Lodge Travel	Total Charge
000 - GENERAL SITE COSTS						
001-SUPERVISOR 1	1	15	12.00	9,987.31	1,468.94	11,456.24
003-CLEANUP TECH-HAZ	3	15	12.00	25,600.82	4,406.81	30,007.62
005-EQUIP OPERATOR	1	15	12.00	9,805.23	1,468.94	11,274.17
006-TRUCK DRIVER	2	4	12.00	5,229.46	783.43	6,012.89
013-FLD CLERK/TYPIST	1	15	12.00	7,626.86	1,468.94	9,095.79
					Total for GENERAL SITE COSTS :	67,846.71
					Total personnel cost:	67,846.71

Contractor Equipment

Equipment Name	Number Needed	Reg Days	Hours /day	Stby Days	Mob/Demob Days	Decon Days	Mileage	Total Charge
000 - GENERAL SITE COSTS								
043-TRUCK PICK UP	1	15	12.00	0	0	0	N/A	510.83
049-TRUCK BOX 2 TON	1	15	12.00	0	0	0	N/A	2,014.68
062-TRLR DECON 8X25	1	15	12.00	0	4	2	N/A	2,734.64
075-TRUCK ROAD TRACTOR	2	4	12.00	0	4	0	N/A	4,327.95
076-BACKHOE CAT 225	1	15	12.00	0	4	2	N/A	12,062.03
093-FORK LIFT 2 TON	1	5	12.00	0	2	1	N/A	879.49
166-GENERATOR 10 KW	1	15	12.00	0	4	2	N/A	627.21
189-PUMP ACID	1	15	12.00	0	4	2	N/A	2,230.38
198-DRUM GRAPPLER 360	1	15	12.00	0	4	2	N/A	1,603.71
205-ANYL CYANIDE MONITOR	1	15	12.00	0	4	2	N/A	558.39
212-LASER WATER HIGH PR	1	15	12.00	0	4	2	N/A	4,952.10
267-LOWBOY, 20 TON	2	4	12.00	0	4	2	N/A	3,907.62
333-CHOPSAW	1	15	12.00	0	4	2	N/A	450.00
990-BOBCAT	1	15	12.00	0	4	2	N/A	6,150.00
992-PASSENGER VAN	1	15	12.00	0	4	2	N/A	660.00
					Total for GENERAL SITE COSTS :			43,669.03
					Total equipment cost:			43,669.03

Projection ID Number: IL0762SA Date: 04/02/92
Cleanup Contractor: 1019 - OH MATERIALS TAT Contractor: ECOL. & ENVIRON

Unit Rate Materials

Material Name	Material Use	Unit Cost	Number of Units	Total Charge
000 - GENERAL SITE COSTS				
PPE	PERSONNEL PROT	85.000	80.0 PERSON DAY	7,718.00
			Total for GENERAL SITE COSTS :	7,718.00
			Total unit rate materials cost:	7,718.00

At Cost Materials

Material Name	Material Use	Quantity/Amount	Total Charge
000 - GENERAL SITE COSTS			
GAS	GENERAT + CARS	1000 GALS.	1,248.50
HYPOCHLORITE	DECON	55 GALLONS	113.50
OFFICE SUPPLIES	DOCUMENTATION	MISC.	56.75
		Total for GENERAL SITE COSTS :	1,418.75
		Total at cost materials cost:	1,418.75

Subcontractors

Subcontractor	Service	Billing	Total Charge
000 - GENERAL SITE COSTS			
LAB ANALYTICAL	LAB ANALYTICAL	1.0 MONTH	11,650.00
PORT-A-LET	PORT BATHROOM REN	1.0 MONTHS	116.50
COMMONWEALTH EDISON	ELECTRIC SERVICE	1.0 MONTHS	1,747.50
ILLINOIS BELL	PHONE SERVICE	1.0 MONTHS	582.50
ACME DRINKING WATER	DRINKING WATER	1.0 1 MONTH	349.50
ACME OFFICE TRAILER	COMMAND POST	2.0 MONTH	454.00
SET	PER DIEM CHARGES	15.0 DAYS	2,655.90
ACME SECURITY	SITE SECURITY	1.0 MONTH	1,225.80
	LODGING FOR WORKR	15.0 DAYS	5,766.75
		Total for GENERAL SITE COSTS :	24,548.45
		Total subcontractor cost:	24,548.45

Projection ID Number: IL0762SA Date: 04/02/92
Cleanup Contractor: 1019 - OH MATERIALS TAT Contractor: ECOL. & ENVIRON

Waste Transportation

Waste Type	Amount	Loads	Cost Per Mile	Miles	Total Charge
000 - GENERAL SITE COSTS					
B/N LIQUIDS	2500 GALS.	1	4.00	325	1,475.50
CONTAM SOIL/DEB	5 ROLLOFFS	5	4.00	225	5,107.50
CYANIDE LIQUIDS	4000 GALS.	1	4.00	325	1,475.50
CYANIDE SOLIDS	15 DRUMS	1	4.00	325	1,475.50
OXIDIZING LIQU.	10 DRUMS	1	4.00	325	1,475.50
WASTE OIL	35 DRUMS	1	4.00	250	1,135.00
			Total for GENERAL SITE COSTS :		12,144.50
			Total transportation cost:		12,144.50

Waste Disposal

Waste Type	Disposal Method	Units	No. of Units	Unit Cost	Total Charge
000 - GENERAL SITE COSTS					
B/N LIQUIDS	TREATMENT	GALLONS	2500	1.00	2,837.50
CONTAM SOIL/DEB	LANDFILL	CUBIC YD	110	250.00	31,212.50
CYANIDE LIQUIDS	TREATMENT	GALLONS	4000	8.00	36,320.00
CYANIDE SOLIDS	TREATMENT	DRUMS	15	500.00	8,512.50
OXIDIZING LIQU.	TREATMENT	DRUMS	10	200.00	2,270.00
WASTE OIL	FUELS BLENDING	DRUM	35	70.00	2,780.75
			Total for GENERAL SITE COSTS :		83,933.25
			Total disposal cost:		83,933.25

Federal and State Agencies 0.00

15 % Extramural Contingency: 36,191.80

TAT Personnel

Redacted-information not relevant to the selection of the removal action.

Projection ID Number: IL0762SA Date: 04/02/92
Cleanup Contractor: 1019 - OH MATERIALS TAT Contractor: ECOL. & ENVIRON

TAT Personnel

Level	Number of Days	Hrs per Day	Hourly Rate	Labor	PD, Lodge Travel	Total Charge

Total TAT personnel cost: 43,030.40

TAT Special Projects 0.00

TAT Analytical Services 0.00

Other Costs 0.00

15 % Project Contingency: 48,075.13

EPA Regional Personnel

Title	Number of Days	Hrs per Day	Hourly Rate	Labor	PD, Lodge Travel	Total Charge
000 - GENERAL SITE COSTS						
OSC	15	12.00	30.00	5,400.00	1,215.00	10,615.00

Total for GENERAL SITE COSTS : 10,615.00

Total EPA Regional Personnel Cost: 10,615.00

EPA Headquarters Cost: 0.00
(0 % of Regional hours)

EPA Indirect Cost: 0.00
(180 hours @ $0.00 per hour)

EPA Non-Regional Personnel 0.00

Total EPA Cost: 10,615.00

Total site cost: 379,191.03

APPENDIX B
SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 1 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1200

DIRECTION OF PHOTOGRAPH: south

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of the Park Plating site as seen from the far north end of the site.

DATE: 02/28/92

TIME: 1200

DIRECTION OF PHOTOGRAPH: south

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of site from concrete foundation where the former plating shop once stood.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating

U.S. EPA ID:

TDD: T05-9112-027

PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1205

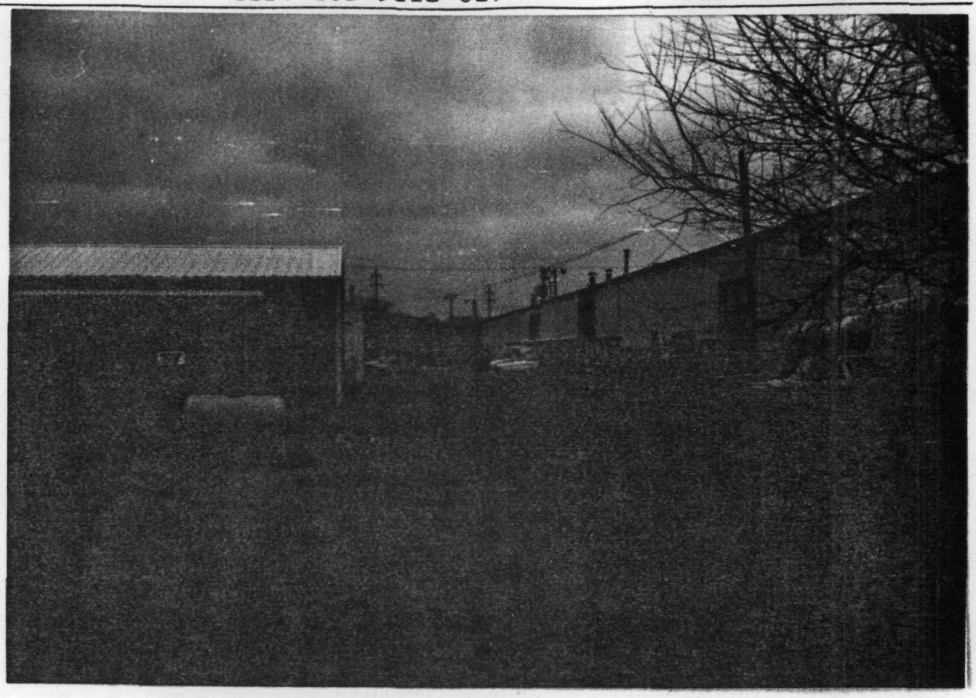
DIRECTION OF PHOTOGRAPH: south

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of brown metal building where drums are stored.

DATE: 02/28/92

TIME: 1210

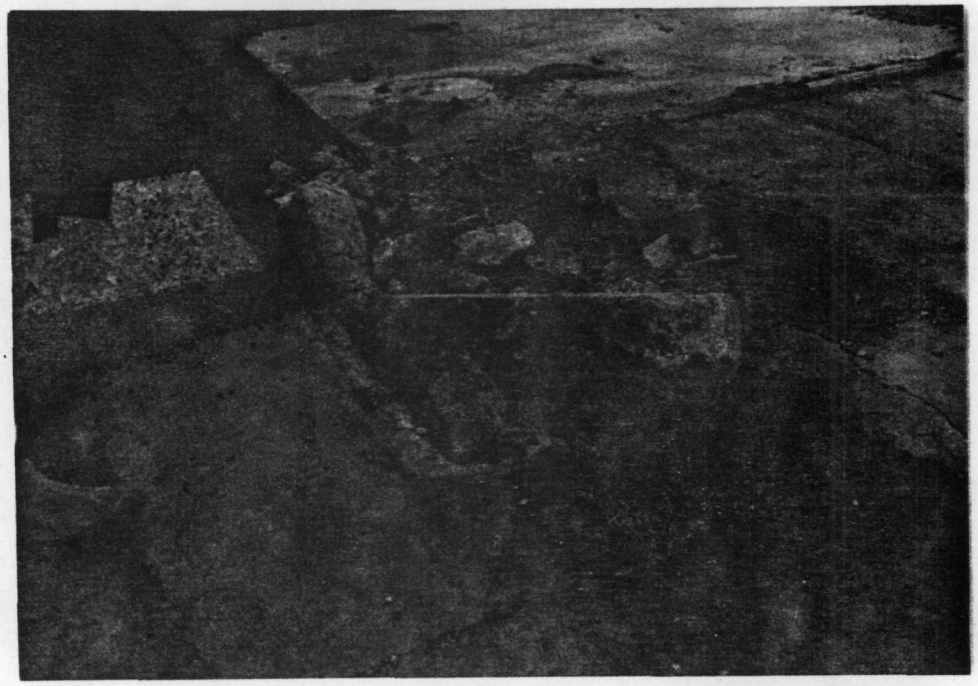
DIRECTION OF PHOTOGRAPH: north

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of stained concrete where former plating shop once stood.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 3 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1210

DIRECTION OF PHOTOGRAPH: northeast

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of stained concrete where former plating shop stood.

DATE: 02/28/92

TIME:1215

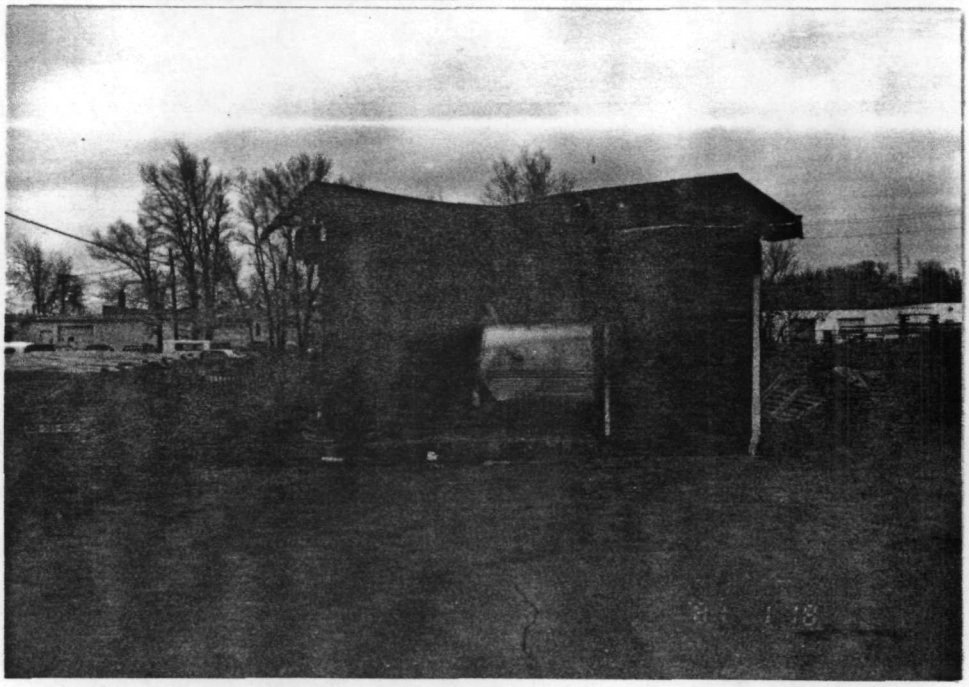
DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of burned-out office building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 4 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1215

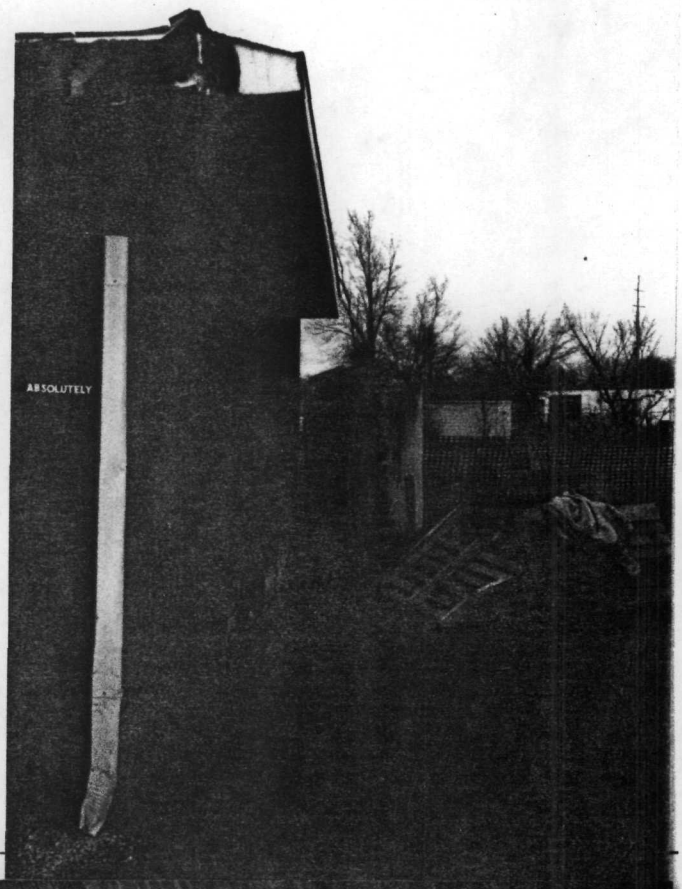
DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of south end of office building.



DATE: 02/28/92

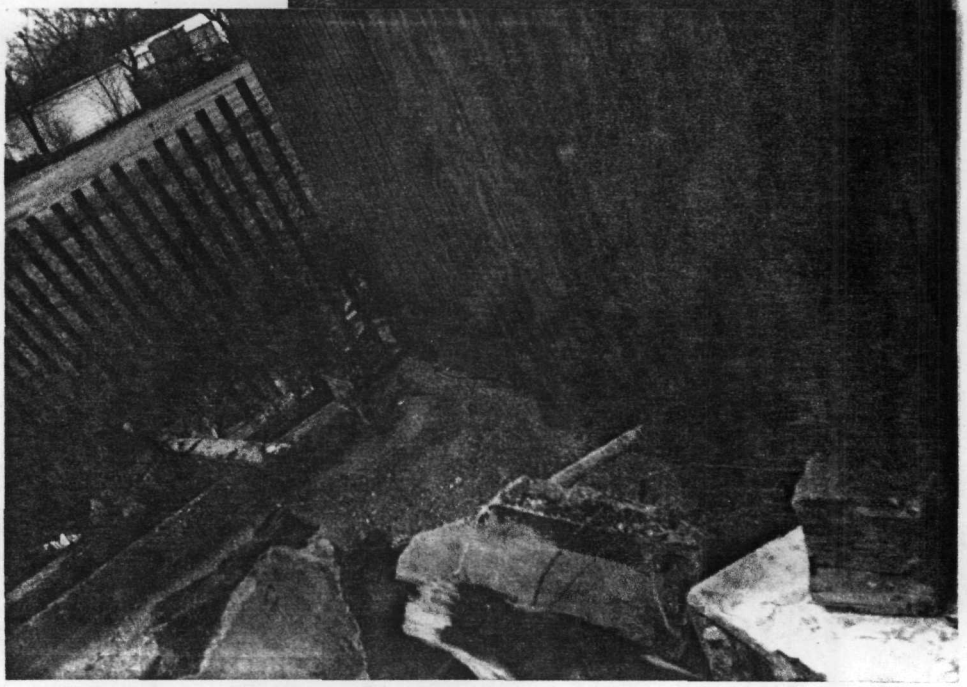
TIME: 1215

DIRECTION OF PHOTOGRAPH: southeast

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of north end of office building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 5 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1220

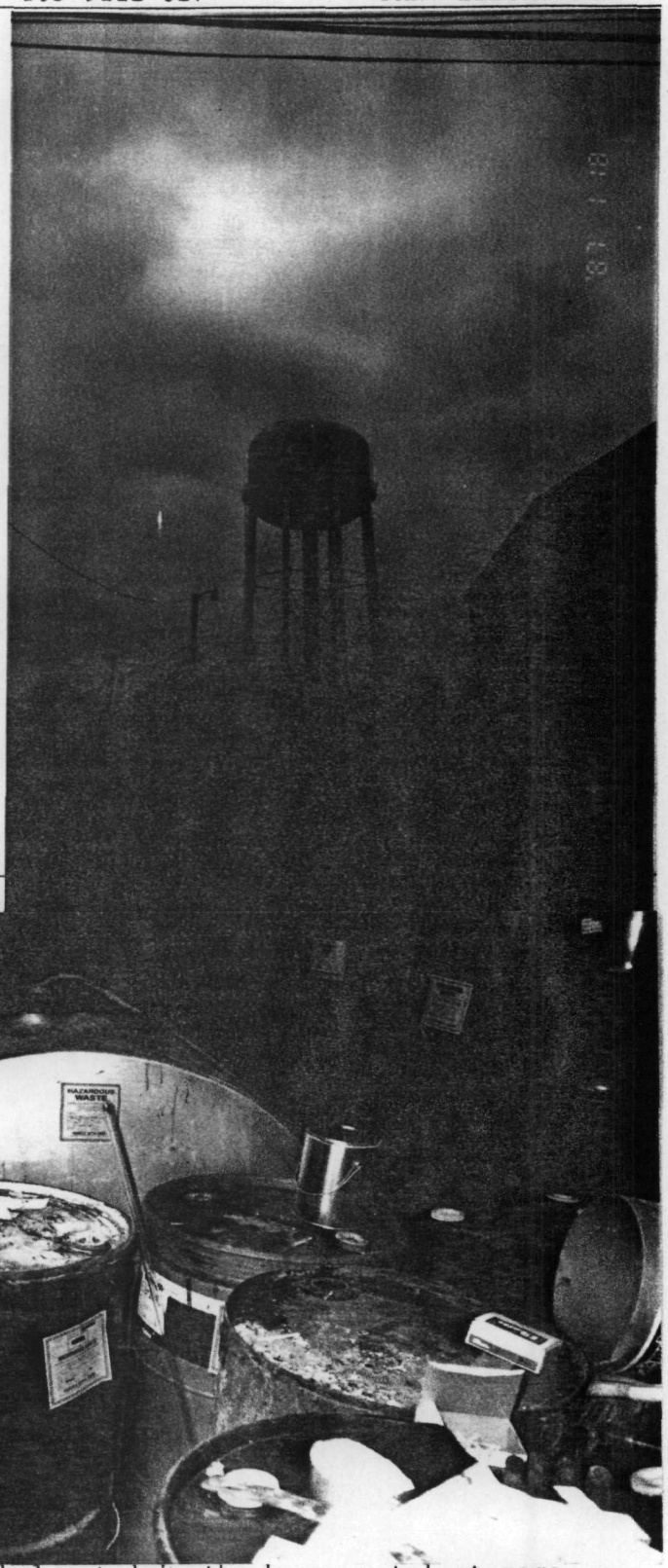
DIRECTION OF PHOTOGRAPH: west

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of municipal well located west of the site.



DATE: 02/28/92

TIME: 1225

DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of drums and a tank located in the brown metal storage building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 6 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1230

DIRECTION OF PHOTOGRAPH: west

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of drums in storage building.

DATE: 02/28/92

TIME: 1235

DIRECTION OF PHOTOGRAPH: southeast

WEATHER CONDITIONS: overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: View of drums on east side within storage building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 7 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1235

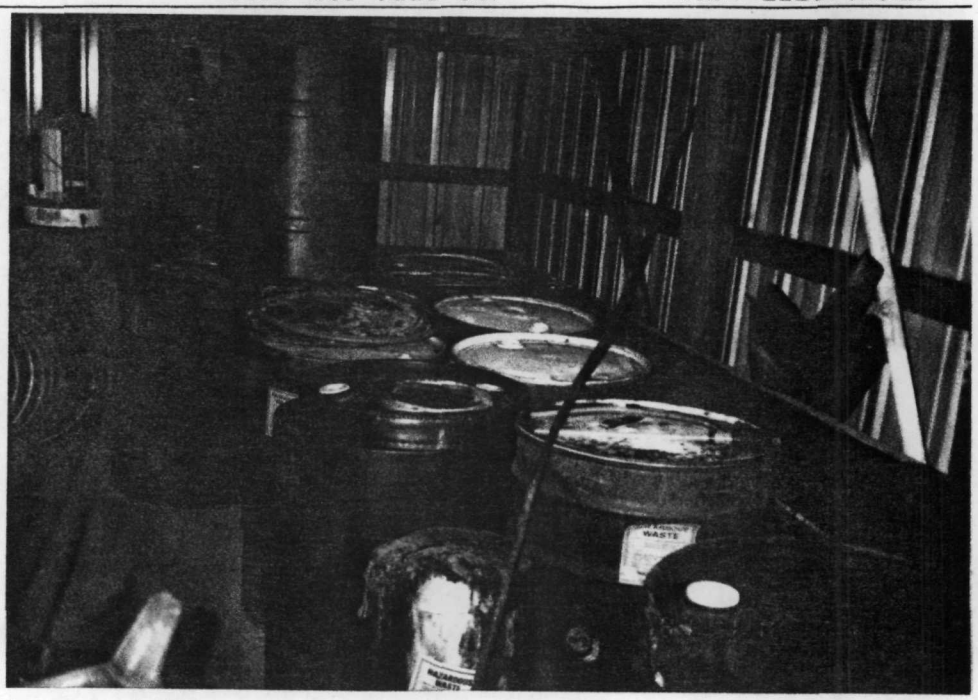
DIRECTION OF PHOTOGRAPH: west

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of drums along west side of north wall within the storage building.

DATE: 02/28/92

TIME: 1240

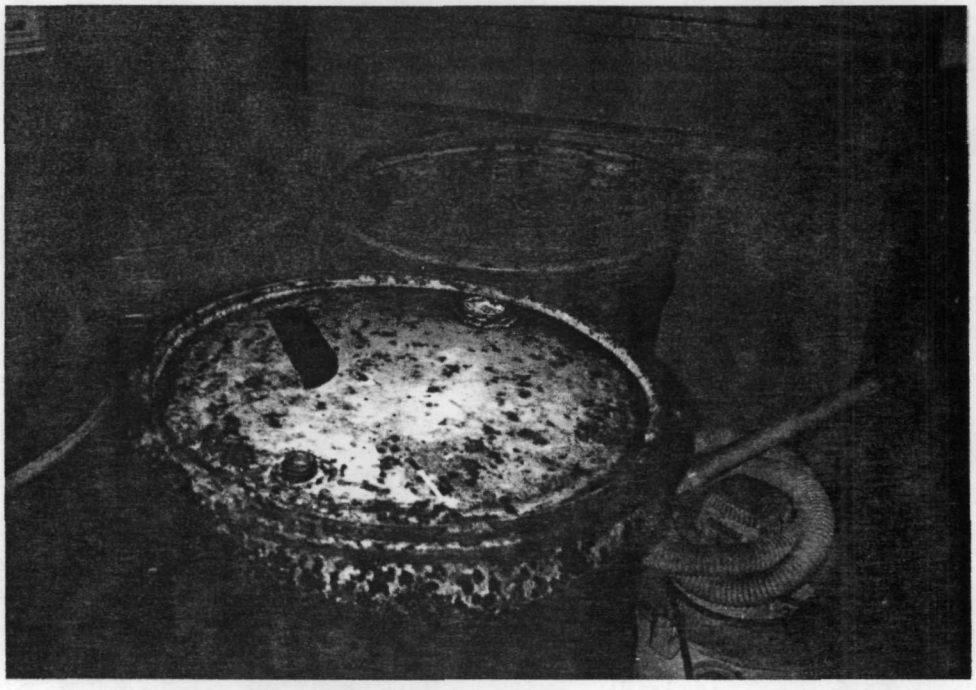
DIRECTION OF PHOTOGRAPH: south

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of drum where sample 0005 was collected.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 8 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME:

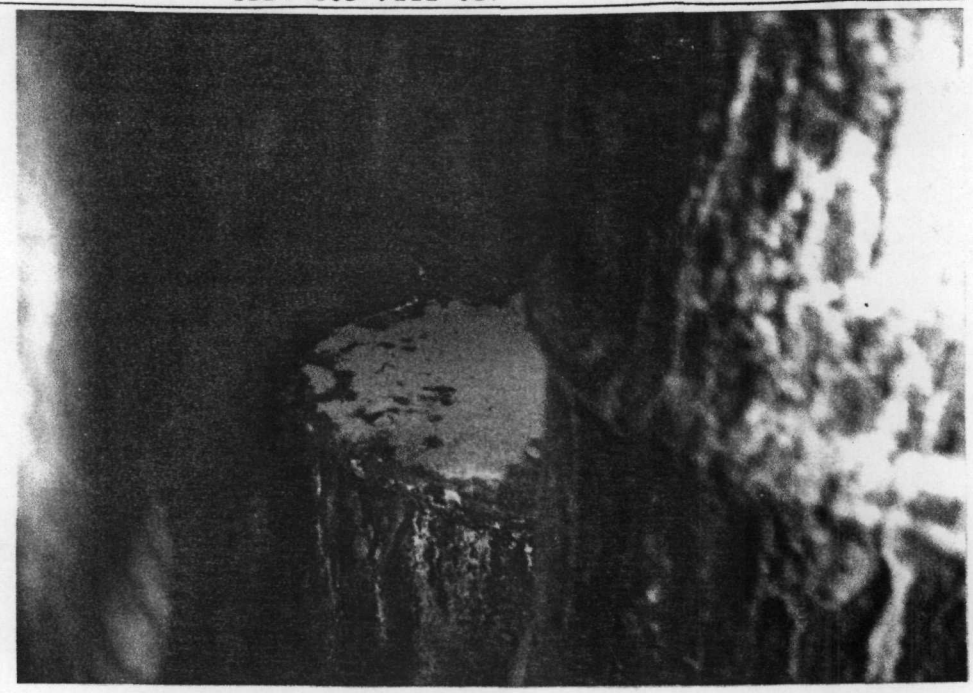
DIRECTION OF PHOTOGRAPH: southeast

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of corroded drum within west side of storage building.

DATE: 02/28/92

TIME: 1245

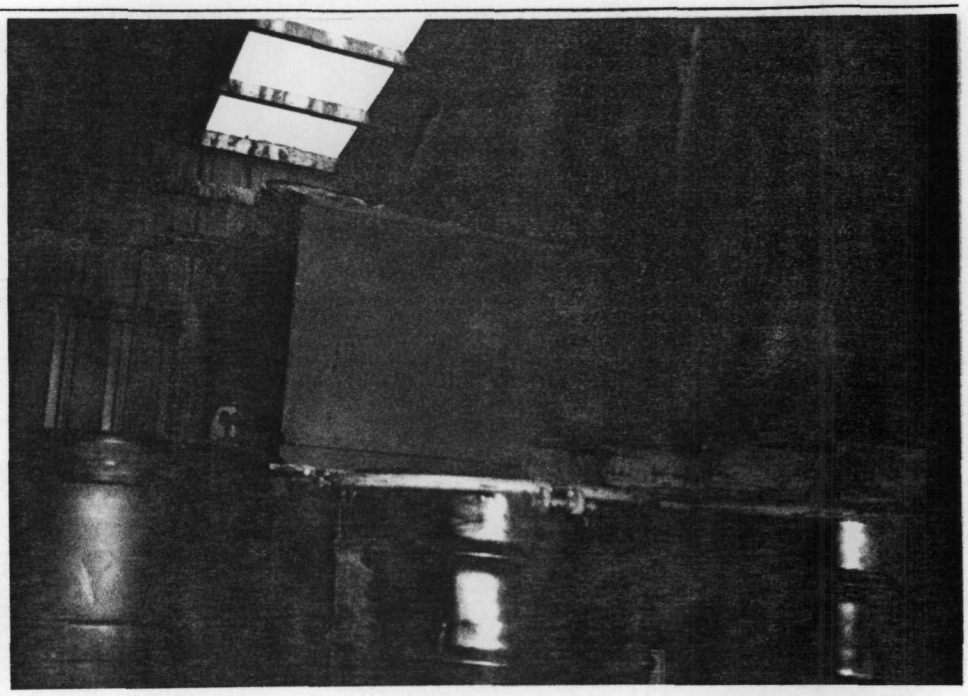
DIRECTION OF PHOTOGRAPH: south

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of drums (foreground) and empty vats and drums (background) located in storage building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 9 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1250

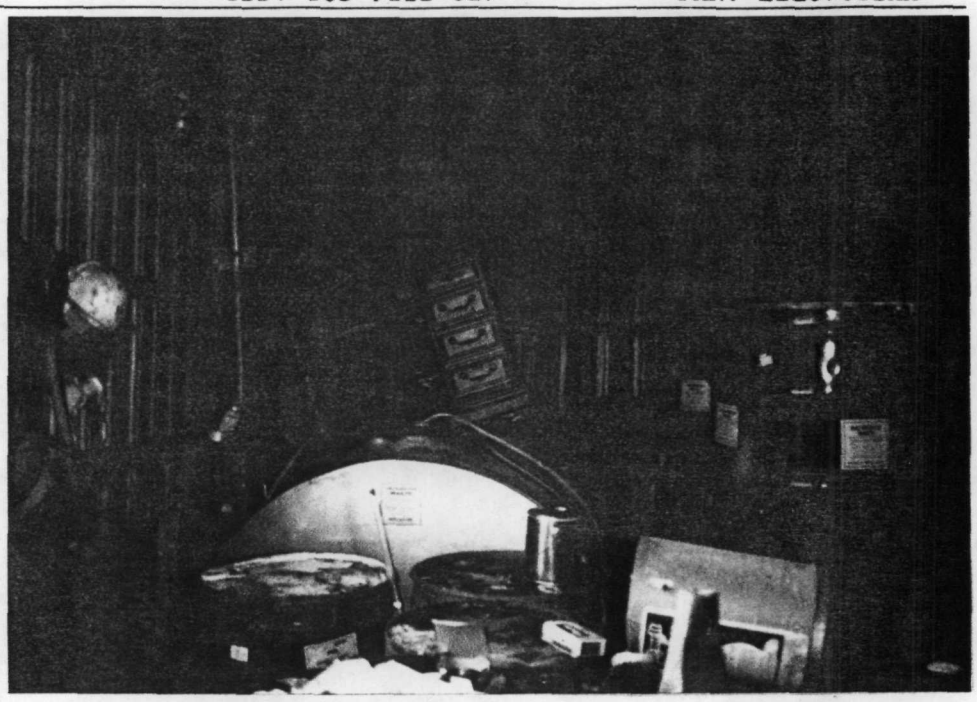
DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: Drums and tank located in east side of storage building.

DATE: 02/28/92

TIME: 1255

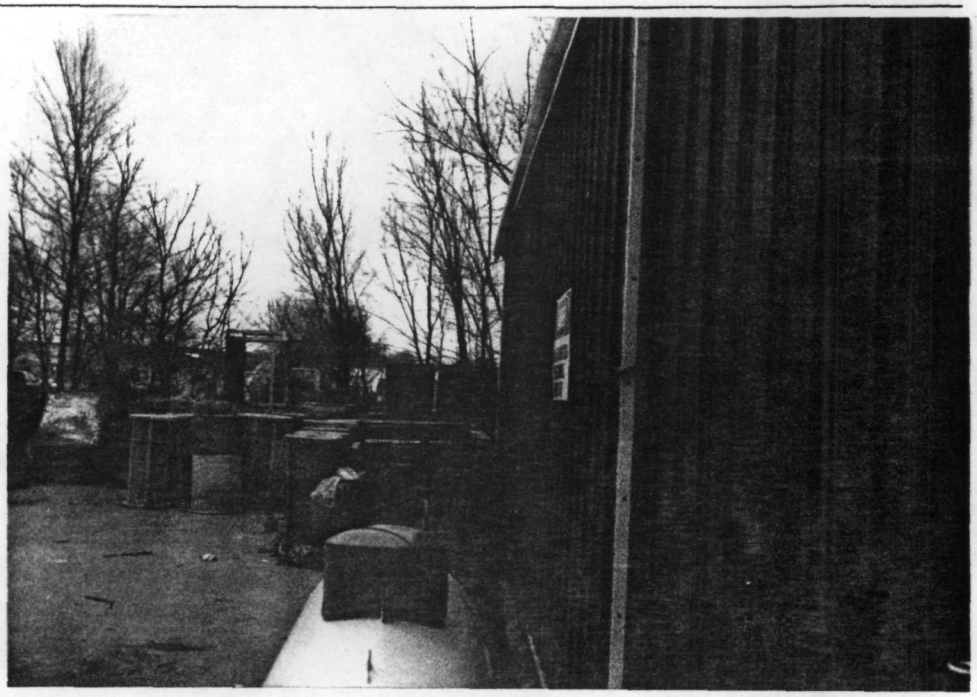
DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of drums and debris located to the north of the storage building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 10 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1300

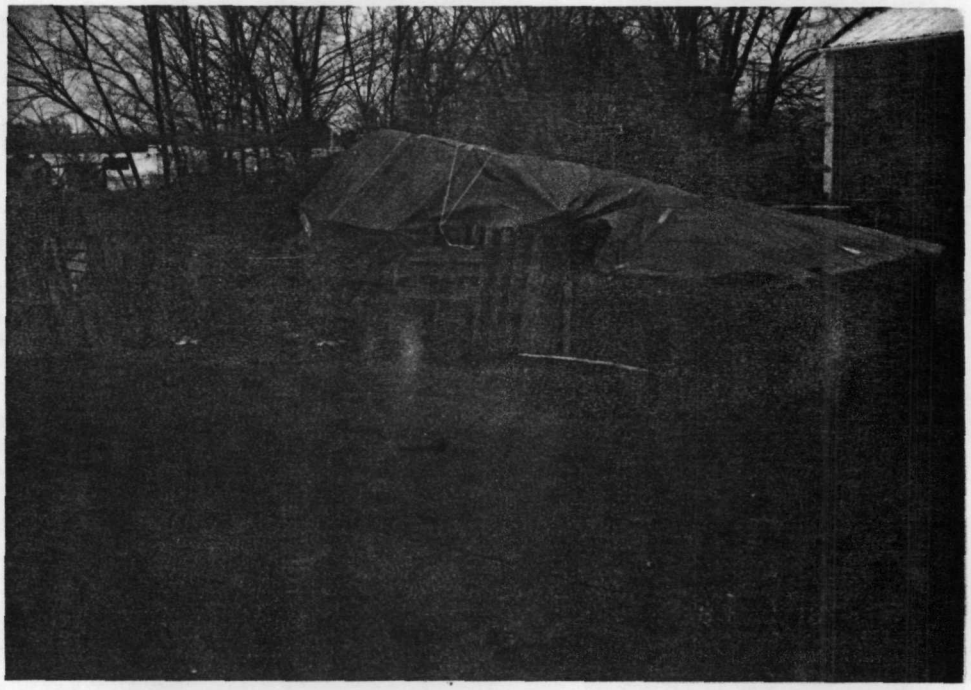
DIRECTION OF PHOTOGRAPH: southeast

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: Covered vats and debris located along the east side of the site north of the storage building.

DATE: 02/28/92

TIME: 1305

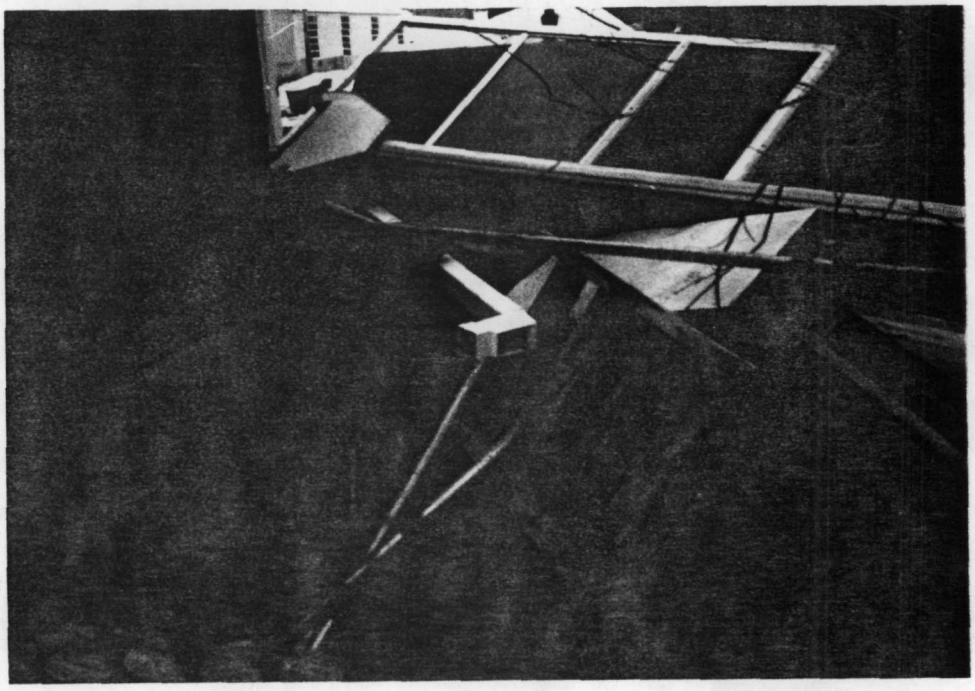
DIRECTION OF PHOTOGRAPH: north

WEATHER CONDITIONS: Overcast,

40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of drums and debris located to the east of the storage building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Park Plating PAGE 11 OF 11

U.S. EPA ID: TDD: T05-9112-027 PAN: EIL0762SAA

DATE: 02/28/92

TIME: 1310

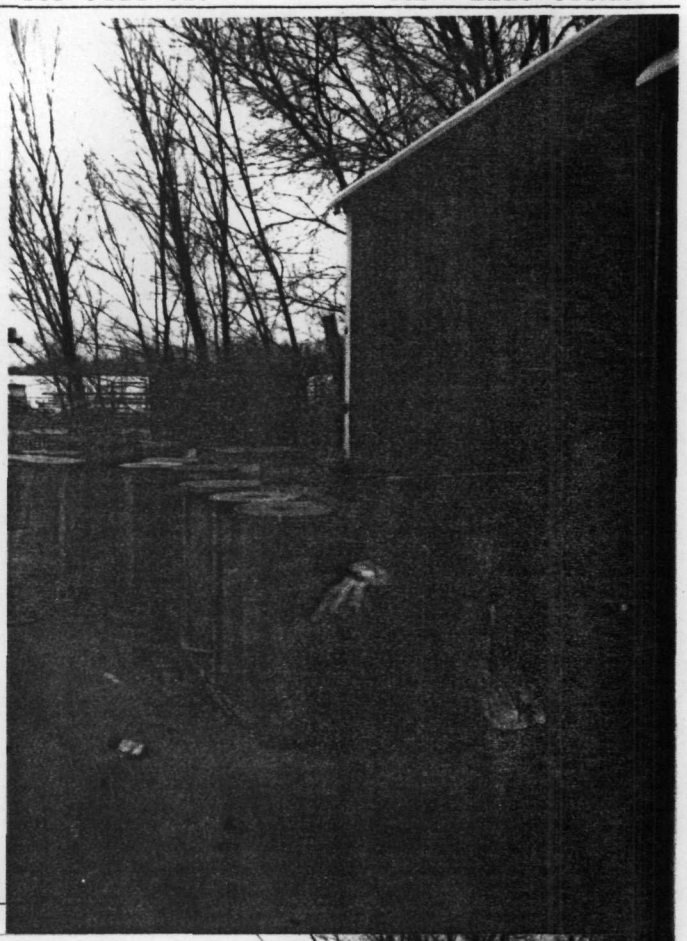
DIRECTION OF PHOTOGRAPH: east

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):

DESCRIPTION: Drums and debris located north of storage building.



DATE: 02/28/92

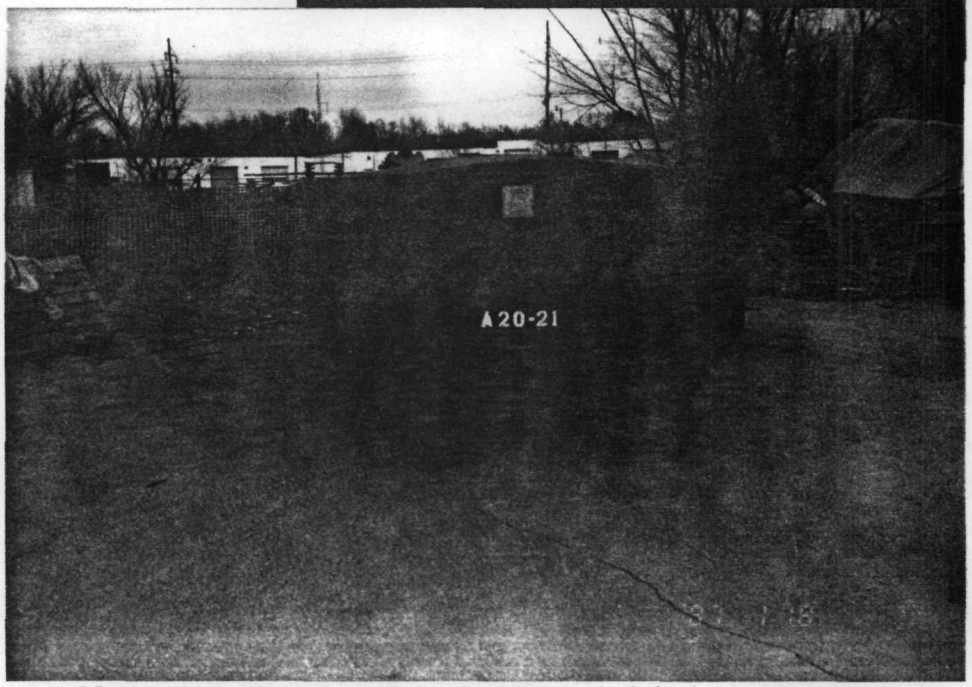
TIME: 1315

DIRECTION OF PHOTOGRAPH: southeast

WEATHER CONDITIONS: overcast, 40°F

PHOTOGRAPHED BY: W. Sass

SAMPLE ID (if applicable):



DESCRIPTION: View of rolloff box containing contaminated debris.

APPENDIX C
ANALYTICAL DATA

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

MEMORANDUM

DATE: March 19, 1992

TO: Bill Sass, Project Manager, E & E, Chicago, IL

FROM: Jane Malkin, TAT-Chemist, E & E, Chicago, IL

SUBJ: **Inorganic Data Quality Assurance Review**, Park Plating, Lovespark, IL

REF: Analytical TDD: T05-9112-810 Project TDD: T05-9112-027
Analytical PAN: EIL0762AAA Project PAN: EIL0762SAA

The data quality assurance review of 5 drum samples collected from the Park Plating site in Lovespark, Illinois has been completed. The analysis for metals by inductively coupled plasma (ICP) (EPA method 6010), the analysis for mercury by manual cold-vapor technique (EPA method 7470), and the analysis for total and reactive cyanides by colorimetric method was performed by IEA Laboratories, Schaumburg, Illinois.

The 5 samples were numbered: 0001, 0003, 0004, 0005, and 0006.

Data Qualifications:

I. Sample Holding Time: Acceptable.

The samples were collected on 2/28/92 and analyzed by 3/17/92. The samples was analyzed within the 6 months holding time from the date of collection allowed for metal samples and within 28 days holding time allowed in the case of mercury. The allowed holding time of 14 days for the cyanide sample was exceeded. All the cyanide results were flagged (J) as estimated.

II. Calibration

A. Initial Calibration and Calibration Verification: Acceptable

ICP: Initial calibration was performed with a blank and one standard. All results were within 90 - 110% of the true standard value. No contamination above the instrument detection limit (IDL) was detected in the initial calibration blank.

All results were within 80 - 120% of the true standard value in the initial calibration for mercury. No contamination above the instrument detection limit (IDL) was detected in the initial calibration blank.

Initial calibration for cyanide was performed with 1 blank and 4 standards. The correlation coefficient is $\geq$ 0.995.

B. Continuing Calibration: Acceptable

All continuing calibration results were within the control limit of 90 - 110% for the metals and within 80 - 120% for mercury. No contamination above the IDL was detected in the continuing calibration blank.

III. Blanks: Acceptable

Method blanks were prepared and analyzed with the samples. No contamination above the IDL was detected.

IV. Interference Check Sample (ICS) Analysis: Acceptable

All the ICS recoveries were all within the control limits of 80 - 120%.

V. Error Determination: Acceptable.

Sample 0005 was spiked with metals analyzed for. All percent spike recoveries were within the control limit of 75 - 125%. The concentration of cadmium, chromium, nickel and silver in the sample were greater than 4 times the concentration of the spike, and therefore, spike recovery was not determined. The concentration of cyanide in the spiked sample was also greater than 4 times the concentration of the spike and therefore the spike recovery was not determined.

VI. Determination of Bias

Duplicate Sample Analysis: Acceptable

Sample 0006 was run in duplicate for metals. The relative percentage difference (RPD) was within the acceptable control limit.

Sample 0004 was run in duplicate for cyanide. The (RPD) was within the prescribed control limits.

VII. Laboratory control Sample Analysis: Acceptable

All laboratory control sample analysis results were all within the 80 - 120% recovery control limit.

VIII. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in "Quality Assurance/Quality Control Guidance for Removal Activities" (OSWER Directive 9360.4-01, April 1990).

Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limits or quality control criteria were not met.

CLIENT ECOLOGY & ENVIRONMENT
JOB NO. CH920197

WASTE

ANALYTE LIST

Analyte / Client I.D. / Lab I.D.	0001 / 20197 001	0003 / 20197 002	0004 / 20197 003	0005 / 20197 004	0006 / 20197 005	Units of Detection
pH	3.15	0.45	13.24	12.70	8.44	STANDARD
Total Cyanide	----	----	17000	600000	0.19	(mg/L)
Reactive Cyanide	----	----	7500	21000	6	(mg/Kg)

mail to
3/20/92

CLIENT ECOLOGY & ENVIRONMENT
JOB NO. CH920197

OIL

TOTAL RCRA METALS
mg / L

Analyte / Client I.D. / Lab I.D.	0001 / 20197 001	0003 / 20197 002	0004 / 20197 003	0005 / 20197 004	0006 / 20197 005	
Arsenic	<10	<10	<5.0	4.2	<1.0	
Barium	<5.0	<5.0	<2.5	<0.50	<0.50	
Cadmium	15000	920	<0.25	9000	<0.050	
Chromium	22000	55000	4.6	15	<0.10	
Lead	<5.0	14	<2.5	0.96	<0.50	
Mercury	<0.002	<0.002	<0.002	<0.002	<0.002	
Selenium	<10	<10	<5.0	<1.0	<1.0	
Silver	<1.0	<1.0	<0.50	1.1	<0.10	
Nickel	4.2	<3.0	<1.5	27	<0.10	
Zinc	1300	280	25000	210	<0.20	

LIENT ECOLOGY & ENVIRONMENT
OB NO. CH920197

WASTE

ANALYTE LIST

Analyte	Client I.D. / Lab I.D.	0001 / 20197 001	0003 / 20197 002	0004 / 20197 003	0005 / 20197 004	0006 / 20197 005	Units of Detection
pH		3.15	0.45	13.24	12.70	8.44	STANDARD